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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/830,028	08/15/2001	Markku Verkama	P279295	9392
909	7590	06/03/2005	EXAMINER	
PILLSBURY WINTHROP SHAW PITTMAN, LLP			IQBAL, KHAWAR	
P.O. BOX 10500			ART UNIT	
MCLEAN, VA 22102			PAPER NUMBER	
			2686	

DATE MAILED: 06/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/830,028

Applicant(s)

VERKAMA, MARKKU

Examiner

Khawar Iqbal

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 07 April 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-2,4-12 and 14-17 are rejected under 35 U.S.C. 102(e) as being unpatentable by Tseng et al (6172974).

3. Regarding claim 1 Tseng et al teaches a digital telecommunication system comprising (figs. 1-4):

a first center (14A, 12B) configured to enable speech communication between a plurality of terminals (MS A, MS B), the first center being (14a, 12a) associated with a calling terminal (MS A) and including a first transcoder (24) unit (col. 4, lines 35-55,col. 6, line 45-col. 7, line 57);

a second center (12B, 14B) that is configured to enable speech communication between a plurality of terminals (MS A, MS B), the second centre (12B, 14B') being associated with a called terminal (MSB) and including a second transcoder unit (24) (col. 4, lines 35-55,col. 6, line 45-col. 7, line 57),

wherein the first and second transcoder units each include speech codecs (24), and each of the terminals comprises one or more speech codecs (col. 4, lines 40-45),

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the terminals being arranged to provide information regarding the supported one or more speech codecs to their associated switching centers (col. 4, lines 35-55,col. 6, line 45-col. 7, line 57);

the first centre (14A, 12B) is configured to perform handshaking with the second center (12B, 14B), the handshaking including indication of the speech codecs supported by the calling terminal (col. 4, lines 35-55,col. 6, line 45-col. 7, line 57) wherein at least one of the first and second centres is configured to choose the speech codec used commonly by the calling and called terminals (col. 6, lines 14-35, col. 7, lines 20-51), and wherein at least one of the first and second centres is configured to establish call connections that bypass one or more of the transcoder units or to control the transcoder units to transmit encoded speech between the called and calling terminals without performing speech encoding operations so that speech is encoded and decoded only in the terminals (col. 4, lines 35-55,col. 6, line 45-col. 7, line 57, col. 9, lines 1-65).

Regarding claim 2 Tseng et al teaches wherein the telecommunication system is a mobile communication system in which the terminals include mobile stations, and the telecommunication system further comprises a mobile communication network and at least one of the first and second centres is a mobile switching center (col. 4, lines 35-55,col. 6, line 45-col. 7, line 57).

Regarding claim 4 Tseng et al teaches wherein the handshaking is performed as outband signaling (col. 4, lines 35-55,col. 6, line 45-col. 7, line 57).

Regarding claim 5 Tseng et al teaches wherein the first and second centres are configured to perform the handshaking in association with a routing information inquiry

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issued in response to a determination that the called terminal is a mobile subscriber (col. 4, lines 35-55,col. 6, line 45-col. 7, line 57, col. 9, lines 1-65).

Regarding claim 6,7 Tseng et al teaches the first center is configured to send the routing information inquiry including information associated with the speed coded sported by the calling terminal (col. 4, lines 35-55,col. 6, line 45-col. 7, line 57, col. 9, lines 1-65).

Regarding claim 8 Tseng et al teaches wherein the first and second centres are configured to perform the handshaking in association with inter-MSC signaling (col. 4, lines 35-55,col. 6, line 45-col. 7, line 57, col. 9, lines 1-65).

Regarding claim 9 Tseng et al teaches the first centre is configured to send a message requesting connection set-up, the message including information indicating, the speech codecs supported by the calling terminal (col. 4, lines 35-55, col. 6, line 45-col. 7, line 57, col. 9, lines 1-65) the second centre is configured to select a speech codec associated with the call connection which both the called and calling terminals are configured to support, and the second centre is configured to send information associated with the codec associated with the call connection, in a reply message to the connection set-up message (col. 4, lines 35-55, col. 6, line 45-col. 7, line 57, col. 9, lines 1-65).

Regarding claims 10,11 Tseng et al teaches wherein, when required, at least one of the first and second centre is configured to notify the associated of the speech codec it has to use as the result of the handshaking (col. 4, lines 35-55, col. 6, line 45-col. 7, line 57, col. 9, lines 1-65).

Regarding claim 12 Tseng et al teaches wherein a pulse code modulated digital link exists between the first and second centres, and the first and second centres are configured to control their respective transcoder units to adapt an encoded speech signal to one or more least significant bits of PCM samples without transcoding (col. 4, lines 35-55,col. 6, line 45-col. 7, line 57, col. 9, lines 1-65).

Regarding claim 14 Tseng et al teaches a centre in a digital telecommunication network configured to receive information regarding supported one or more speech codecs of a calling terminal and connect a transcoder located in a transcoder unit to a call connection when required, wherein (figs. 1-4):

the centre is configured to perform handshaking with another centre associated with a called terminal, the handshaking including indication of speech codecs supported by the calling terminal associated with the centre, the centre also being configured to choose the speech codec commonly used by the terminals (col. 4, lines 35-55,col. 6, line 45-col. 7, line 57, col. 9, lines 1-65), and the centre is configured to connect a call connection that bypasses the transcoder unit or to control the transcoder unit to transmit the encoded speech without performing speech encoding operations in such a way that speech encoding and decoding are only performed in the calling or called terminal (col. 4, lines 35-55,col. 6, line 45-col. 7, line 57, col. 9, lines 1-65).

Regarding claim 15-17 Tseng et al teach MSC signaling is ISUP setup is an IAM and ANM message (see fig. 2).

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tseng et al (6172974) and further in view of Valentine et al (6600740).

Tseng et al does not specifically teach packet switched link.

In an analogous art, Valentine et al teaches packet switched link (col. 6, line 11-15). Transmitter generates signal identifying the originating encoding algorithm used by the originating codec for encoding an input signal. Processor analyzes encoding artifacts detected in the encoding signal, after processing the encoding algorithm identification signal and applies analysis in conjunction with the encoding algorithm to reconstruct the input signal. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device of Tseng et al by specifically adding feature the reply message to the connection set-up switched link in order to enhance system performance Improves voice quality by using an encoding algorithm better matching the decoding algorithm and realizes improved voice communication as taught by Valentine et al.

6. Claim 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tseng et al (6172974) and further in view of Lev et al (5608779).

Regarding claims 3 Tseng et al teaches the originating and terminating units of voice communication system contains a vocoder, base station for wireless communication and a BSC/MSC having a codec. The base stations are interconnected through voice channels. The originating and terminating units contain A/D-D/A converters and apparatus for achieving tandem free operation (TFO) in which the codecs in MSC/BSC are bypassed. Signaling device of terminating unit responds to call initiation signal of originating unit through BSC/MSC and sends a low frequency signal through channel to the base station of originating unit. The frequency of signal indicates the type and capabilities of terminating unit vocoder, which is less than the roll-off frequency of A/D-D/A converters. An analyzer of originating unit base station analyses the received low frequency signal and determines the compatible condition of digital signals between vocoders. The control units provided in base stations directs voice signals between units and bypasses both BSC/MSC vocoders, when the digital signals of terminating unit vocoder is compatible with originating unit vocoder and directs digital voice signal in tandem mode when the digital signal of terminating unit vocoder is not compatible with originating unit. The compatible condition of digital signals of terminating unit vocoder with originating unit vocoder is determined, by analysis of low frequency signal (col. 4, lines 35-55,col. 6, line 45-col. 7, line 57, col. 9, lines 1-65, see fig. 2). Tseng et al does not specifically teach database.

In an analogous art, Lev et al teaches switching centers have database (col. 6, lines 39-55). The transcoders (121-123) can also operate in a transcoding mode; that is, compressed digital audio is converted in to non-compressed digital audio and vice



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versa. To maintain continuity throughout the system (100), the operating modes of each transcoder (121-123) are stored in memory (131) of the switching center (101).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device of Tseng et al by specifically adding feature database in order to enhance system performance Improves voice quality by using an encoding algorithm better matching the decoding algorithm and realizes improved voice communication as taught by Lev et al.

### ***Response to Arguments***

7. Applicant's arguments with respect to claims 1-17 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Khawar Iqbal whose telephone number is (571) 272-7909.


If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Marsha D. Banks-Harold can be reached on (571) 272-7905. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free) or 703-305-3028.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist/customer service whose telephone number is (571) 272-2600.

*Khawar Iqbal*

  
**RAFAEL PEREZ-GUTIERREZ**  
**PATENT EXAMINER**  
5/22/05